

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for decreasing the size of a frame of digital data from a first number of bits (~~LM~~) to a second number of bits (~~N~~), ~~where the digital data comprising the frame is ordered from a first bit to an LMth bit, the method comprising the steps of:~~
 - (a) ~~Receiving the a frame having LM bits ordered from a first bit to an LMth bit; and~~
 - (b) Deleting LM-N bits from the frame in a single iteration through the data, thereby creating a reduced length frame of length N for processing in a digital communications system, wherein the deleting step is performed such that the distance between any two consecutive deleted bits within any group within a first subset of the frame is A bits, and the distance between any two consecutive deleted bits within any group within a second subset of the frame is B bits, where A is an integer greater than 0 and B is an integer greater than A, and where the first subset and the second subset together form a first plurality of consecutive bits;
 - (c) ~~Further processing the reduced length frame in a digital communications system.~~
2. (Original) The method of claim 1 wherein the frame consists of the first subset and the second subset.
3. (Original) The method of claim 1 wherein $B=A+1$.
4. (Original) The method of claim 1 wherein A is equal to D-1, where D is the greatest integer less than LM/P , where $P=LM-N$.
5. (Currently Amended) The method of claim 1 wherein the first subset consists of the first X bits of the frame, where X is the number of bits in length ~~of the first subset~~.
6. (Original) The method of claim 1 wherein the distance between consecutive deleted bits alternates between A and B throughout at least a portion of the frame.
7. (Currently Amended) The method of claim 1 wherein ~~the a~~ second plurality of bits consists of a first plurality of groups, each with a third number of bits, and a second plurality of groups, each with a fourth

number of bits, wherein each group consists of a plurality of bits deleted in order, wherein the first and second plurality of bits are deleted according to a repeating sequence, the sequence consisting of all of the bits within one of the first plurality of groups, one of the first plurality of bits, and all of the bits within one of the second plurality of groups.

8. (Currently Amended) The method of claim 7 wherein:
the third number of bits is equal to the a lower bound of a first real number, where the first real number is equal to the number of bits within the second plurality of bits divided by the number of bits within the first plurality of bits; and
the fourth number of bits is equal to the third number of bits plus 1.
9. (Currently Amended) The method of claim 1, further comprising ~~wherein the step of further processing the reduced length frame comprises the step of interleaving the reduced length frame.~~
10. (New) A method of deriving an N-length frame having a number N of digital bits from a received frame having a number LM larger than N of digital bits, the method comprising:
 - (a) receiving a frame having LM bits in a contiguous sequence indexed from one to LM;
 - (b) selecting puncturing bits (PBs), each PB separated from a PB of next lowest index, if any, by an associated distance of d nonpuncturing bits (NPBs), such that distances d associated with a first plurality of PBs are each equal to a non-zero integer A of NPBs, and distances d associated a second plurality of PBs are each equal to a different non-zero integer B of NPBs; and
 - (c) removing P selected PBs in a single iteration through the bits of the received frame, where $P = (LM - N)$, to produce a punctured frame consisting of N bits.
11. (New) The method of Claim 10, wherein substantially all distances d are equal to A or to B.
12. (New) The method of Claim 10, wherein each distance d between selected PBs in a first contiguous subset of the received frame sequence of bits is A NPBs, and each distance d between selected PBs in a second contiguous subset of the received frame sequence of bits is B NPBs.
13. (New) The method of Claim 10, wherein d for selected PBs of progressively higher index alternate between A and B NPBs.
14. (New) The method of Claim 10, wherein $A = B - 1$.

15. (New) The method of Claim 14, wherein B is a greatest integer less than LM/P , $N_{dB} = (LM - P * B)$, $N_{dA} = P - N_{dB}$, and step (b) includes selecting N_{dA} PBs for which $d = A$, and N_{dB} PBs for which $d = B$.
16. (New) The method of Claim 15, wherein step (b) includes selecting N_{dA} PBs for which $d = A$ from a contiguous subset of the received frame.
17. (New) The method of Claim 16, wherein, for selected PBs of monotonically increasing index, distances d alternate between values A and B .
18. (New) The method of Claim 17, wherein, for the selected PBs of monotonically increasing index, distances d alternate in a predetermined periodic pattern between values A and B .